

## **Amendments to the Claims**

8. (Currently amended) A metal detector, comprising:

- (a) a radio frequency oscillator;
- (b) an oscillator coil, the coil being electrically interconnected to the oscillator so as to emit a magnetic field in a region surrounding the oscillator coil, wherein the oscillator coil is formed as first and second adjacent oscillator coils, the first and second oscillator coils being electrically interconnected in [a] an electrically parallel relationship;
- (c) a first input coil residing within the magnetic field, the first input coil generating a first signal in response to a disturbance of the magnetic field;
- (d) a second input coil residing within the magnetic field, the second input coil generating a second signal in response to a disturbance of the magnetic field; and
- (e) a signal processor, the signal processor measuring a ratio of the first signal and the second signal so as to determine a physical location of an item causing the disturbance of the magnetic field.

9. (Currently amended) A metal detector, comprising:

(a) a radio frequency oscillator;

(b) an oscillator coil, the coil being formed so as to form a relatively small aperture having an area of less than five hundred square centimeters, the coil being electrically interconnected to the oscillator so as to emit a magnetic field in a region surrounding the oscillator coil, wherein the oscillator coil is formed as first and second adjacent oscillator coils, the first and second oscillator coils being interconnected in a series relationship;

(c) a first input coil residing within the magnetic field, the first input coil generating a first signal in response to a disturbance of the magnetic field;

(d) a second input coil residing within the magnetic field, the second input coil generating a second signal in response to a disturbance of the magnetic field; and

(e) a signal processor, the signal processor measuring a ratio of the first signal and the second signal so as to determine a physical location of an item causing the disturbance of the magnetic field.